

### AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

#### LISTING OF CLAIMS

1. (Currently Amended) A transmission method for transmitting on a serial transmission path a data code encoded by superimposing a clock signal for decoding on data to be transmitted,

the encoded data code encoded by said encoding of a first bit length having bits of a predetermined number of bits~~fixed length~~,

said transmission method using ~~multiple kinds a~~ plurality of control codes to be exchanged on said serial transmission path between a sender side and a receiver side, each of said ~~multiple kinds plurality~~ of control codes is of a second bit length having a smaller number of bits smaller in number than said predetermined fixed first bit length, and said transmission method comprising the steps of:

inspecting ~~said a~~ bit string in groups of bits of said ~~smaller number second bit length of bits, and thereby determining~~ in order to determine whether one of said ~~multiple kinds plurality~~ of control codes is present in ~~the a~~ serial signal received ~~on from~~ said serial transmission path or not;

selecting ~~the a~~ second control code to be sent to said serial transmission path based on a ~~result of the determination in said determining inspecting step that a first control code is present;~~

sending, onto said serial transmission path, ~~the a~~ bit string containing at least said second control code to be sent based on the result of the determination in said ~~determining inspecting~~ step; and

receiving the data code by inspecting said bit string in groups of bits of said ~~fixed first bit~~ length in response to the ~~detection of~~ determination that the first control code received from the

opposite side in said determining step ~~indicating~~ indicates the start of transmission of the data ~~from the opposite side in said determining step.~~

2. (Currently Amended) The transmission method according to claim 1, wherein the number of bits of each said ~~multiple kinds~~ plurality of control codes is an integral submultiple of the number of bits of said predetermined ~~fixed~~ first bit length.

3. (Currently Amended) The transmission method according to claim 2, wherein the number of bits of said predetermined ~~fixed~~ first bit length is even, and the number of bits of said ~~multiple kinds~~ plurality of control codes is an even submultiple of the number of bits of said predetermined ~~fixed~~ first bit length.

4. (Currently Amended) The transmission method according to claim 3, wherein the bits of said ~~fixed~~ first bit length are ten in number, and the bits of said ~~multiple kinds~~ plurality of control codes are five in number.

5. (Currently Amended) The transmission method according to claim 1, wherein said transmission path is a half-duplex transmission path, said transmission method is configured to achieve bidirectional communication by switching the direction of communication by exchange of the ~~predetermined~~ first and second control codes, said selecting step includes the step of selecting the sending of said second control code in response to the determination of the existence of said first control code in said ~~determining~~ inspecting step,

said transmission method further comprises the step of producing said second control code in response to the selection of sending of said second control code in said selecting step, and

said sending step includes the steps of:

sending said second control code onto said transmission path subsequently to a predetermined header,

sending said encoded data code subsequently to said second control code, and  
sending said first control code after end of the sending of said encoded data code.

6. (Currently Amended) The transmission method according to claim 1, wherein  
said transmission path is a full-duplex transmission path,  
said transmission method is configured to pass a token by switching the direction of  
communication by exchange of the ~~predetermined~~ first and second control codes,  
said transmission method further comprises the step of starting transmission of said first  
control code onto said transmission path for acquiring the token,  
said ~~determining~~ inspecting step includes the step of determining whether the opposite  
side sends said second control code in response to said first control code or not,  
said selecting step includes the step of sending a third control code indicating sending of  
data in response to the ~~fact that~~ existence of the second control code is determined in said  
~~determining~~ inspecting step, and  
said transmitting method further comprises the steps of:  
determining whether said opposite side sends a fourth control code in response to said  
third control code or not, and  
starting sending of the encoded data code ~~encoded by said encoding method~~ in response  
to determination of sending of said fourth control code.

7. (Currently Amended) A transmission device for transmitting on a serial transmission  
path a data code encoded by superimposing a clock signal for decoding on data to be  
transmitted,

said encoded data code ~~encoded by said encoding of a first bit length~~ having bits of a  
predetermined number of bits ~~fixed length~~,

said transmission device using ~~multiple kinds~~ a plurality of control codes to be  
exchanged on said serial transmission path between a sender side and a receiver side, each of

said ~~multiple kinds plurality~~ of control codes is of a second bit length having a smaller number of bits smaller in number than said predetermined fixed-first bit length, and said transmission device comprising:

determining means for inspecting said a bit string in groups of bits of said small number second bit length of bits, ~~and thereby determining in order to determine~~ whether one of said ~~multiple kinds plurality~~ of control codes is present in ~~the a~~ serial signal received ~~on from~~ said serial transmission path or not;

sending means for ~~determining the~~ selecting a second control code to be sent to said serial transmission path based on ~~a result of the determination of in~~ said determining means, and sending ~~the a~~ bit string containing at least said second control code to be sent onto said serial transmission path; and

data code receiving means for receiving the data code by inspecting said bit string in groups of bits of said fixed-first bit length in response to the ~~detection-determination~~ by said determining means ~~of that~~ the first control code received from the opposite side indicating indicates the start of transmission of the data ~~from the opposite side~~.

8. (Currently Amended) The transmission device according to claim 7, wherein the number of bits of each said ~~multiple kinds plurality~~ of control codes is an integral submultiple of the number of bits of said predetermined fixed-first bit length.

9. (Currently Amended) The transmission device according to claim 8, wherein the number of bits of said predetermined fixed-first bit length is even, and the number of bits of each said ~~multiple kinds plurality~~ of control codes is an even submultiple of the number of bits of said predetermined fixed-first bit length.

10. (Currently Amended) The transmission device according to claim 9, wherein the bits of said fixed-first bit length are ten in number, and the bits of each said ~~multiple kinds plurality~~ of control codes are five in number.

11. (Currently Amended) The transmission device according to claim 7, wherein  
said transmission path is a half-duplex transmission path,  
said transmission device is configured to achieve bidirectional communication by  
switching the direction of communication by exchange of the ~~predetermined~~ first and second  
control codes, and  
said sending means includes:  
means for sending on said transmission path said second control code subsequently to a  
predetermined header in response to determination of the existence of said first control code by  
said determining means,  
means for sending said encoded data code onto said transmission path subsequently to  
said second control code, and  
means for sending said first control code after the end of sending of said encoded data  
code.

12. (Currently Amended) The transmission device according to claim 7, wherein  
said transmission path is a full-duplex transmission path,  
said transmission device is configured to pass a token by switching the direction of  
communication by exchange of the ~~predetermined~~ first and second control codes,  
said transmission device further comprises means for starting transmission of said first  
control code onto said transmission path for acquiring the token,  
said determining means includes the means for determining whether the opposite side  
sends said second control code in response to said first control code or not,  
said sending means includes means for sending a third control code indicating sending of  
data in response to the fact that existence of said second control code is determined by said  
determining means, and  
said transmitting device further comprises:  
means for determining whether said opposite side sends a fourth control code in response  
to said third control code or not, and

means for sending the data code encoded by said encoding method in response to determination of sending of said fourth control code.

13. (Currently Amended) A transmission device for transmitting on a serial transmission path a data code encoded by superimposing a clock signal for decoding on data to be transmitted,

said ~~encoded~~ data code ~~encoded by said encoding of a first bit length~~ having ~~bits of a~~ predetermined ~~number of bits~~fixed length,

said transmission device using ~~multiple kinds a~~ plurality of control codes to be exchanged on said serial transmission path between a sender side and a receiver side, each of said ~~multiple kinds~~ plurality of control codes ~~is of a second bit length~~ having a smaller number of bits ~~smaller in number~~ than said predetermined ~~fixed first bit~~ length, and said transmission device comprising:

a first synchronizing circuit for converting a serial signal received ~~on~~ from said serial transmission path into a parallel signal of bits of the number equal to said ~~control code second bit length~~ and synchronized with a clock signal for processing ~~the control code one of said plurality of control codes~~ with the number of bits of said ~~control code second bit length~~,

a control circuit for determining, in synchronization with the clock signal ~~for processing said control code~~, whether said parallel signal output from said first synchronizing circuit contains any one of said plurality of control codes or not, and controlling said transmission device in accordance with a result of the determination, and

a pack circuit for packing a plurality of characters expressed by said parallel signals output from said first synchronizing circuit into one character of the parallel signal of bits of said ~~fixed first bit~~ length.

14. (Currently Amended) The transmission device according to claim 13, further comprising:

an encoding circuit for encoding the data to be sent into the character expressed by the parallel signal of bits of the ~~fixed first bit~~ length in accordance with said encoding method,

a dividing circuit for dividing each character output from said encoding circuit into a plurality of characters expressed by the parallel signal of the number of bits of said ~~control code~~second bit length,

said control circuit outputting ~~the~~a second control code to be sent to the opposite side in accordance with the result of the determination that the one of the plurality of control codes is received, and

a sending circuit for selecting the second control code output from said control circuit and the output of said dividing circuit, and sending the same onto said transmission path.

15. (Currently Amended) The transmission device according to claim 13, wherein the number of bits of each said ~~multiple kinds plurality~~ of control codes is an integral submultiple of the number of bits of said predetermined ~~fixed~~first bit length.

16. (Currently Amended) The transmission device according to claim 15, wherein the number of bits of said predetermined ~~fixed~~first bit length is even, and the number of bits of each said ~~multiple kinds plurality~~ of control codes is an even submultiple of the number of bits of said predetermined ~~fixed~~first bit length.

17. (Currently Amended) The transmission device according to claim 16, wherein the bits of said ~~fixed~~first bit length are ten in number, and the bits of each said ~~multiple kinds plurality~~ of control codes are five in number.